DOCUMENT RESUME

ED 327 841 CS 010 400

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TITLE Urban Second Graders' Attitudes toward Reading.
PUB DATE Nov 90
NOTE 31p.; Paper presented at the Annual Meeting of the College Reading Association (34th, Nashville, TN, November 2-4, 1990).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Correlation; Grade 2; Informal Reading Inventories; Primary Education; *Reading Achievement; *Reading Attitudes; Reading Research; Recreational Reading; Sex Differences; *Urban Schools; *Urban Youth

ABSTRACT

A study investigated second-grade urban students' attitudes toward reading and examined whether attitudes toward reading correlate with reading achievement and reading performance. Subjects, 42 male and 42 female students from 2 ethnically and racially diverse urban public elementary schools, were individually assessed on primer or preprimer passages using an informal reading inventory and were administered a standardized reading test and a reading attitude measure. Results indicated that: (1) the attitudes toward reading were positive but slipping in relation to recreational reading; and (2) there was a nonsignificant low correlation between total reading attitude and reading achievement. Results also showed that reading at the library appeared to be a truly positive experience especially for boys who were the slowest readers. (Six tables of data are included; 41 references are attached.) (RS)

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# Urban Second Graders' Attitudes Toward Reading

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Running head: URBAN SECOND GRADERS' ATTITUDES

Urban Second Graders' Attitudes Toward Reading

Low reading achievement in urban, multiethnic schools is of grave concern to educators and the general public. Evidence for this concern abounds: government reports, the National Teacher Exam (NTE), state legislation, accountability mandates, and a rising concern about the affective domain in reading. Interest in the affective domain in reading manifests itself in numerous ways: interest questionnaires and attitude surveys are common components of basic or informal reading inventories; motivational activities have become a part of lesson plans; and supporters of "Whole Language" approaches emphasize self-selection of reading materials to create intrinsic purpose and meaning for students.

Numerous studies have described the relationship between children's attitudes toward reading and their reading achievement. The results usually show that good readers possess positive attitudes while poor readers possess negative attitudes. However, situational and contextual variables that lead to attitude, achievement, and performance are more complex than current research on their relationship to reading addresses. For instance, although achievement has been correlated with attitude, little research has been done to assess whether reading performance in a classroom context is related to attitude toward

reading. This study seeks to describe second grade urban students attitudes toward reading and whether attitudes toward reading correlate with reading achievement and reading performance.

## Review of Research

Research generally shows that poor readers have a more negative attitude toward reading than good readers (see Alexander & Filler, 1976, for a review; Lipsky, 1983), but correlations only range from .2 to .4. Discrepant results have been obtained when assessing whether black and low SES children actually have less positive attitudes toward school than children in other SES groups (see Wigfield & Asher, 1984, for a review). Swanson (1983) found that SES of black first graders has an effect on their concepts about reading, but not reading attitude. Coster and Yee found a relationship between low-SES children and less positive attitudes toward reading while Heimberger, Neale, and Proshek did not find a relationship (cited in Wigfield & Asher, 1984).

Factors in the school environment may contribute to low SES students' self-concept of ability because self-concept of ability is similar early in the school experience but rapidly declines for low SES children (Eshel & Klein, 1981). As early as first grade, low progress readers are taught differently irrespective of the program (Allington, 1980,

1983; Hiebert, 1983). Students for whom teachers hold high expectations receive more praise, get more classroom privileges, are called on more often, and get more time to answer questions (Brophy & Good, and others cited in Wigfield & Asher, 1984).

Schofield (1980) found relations between teacher achievement in and attitudes toward reading and their pupils' achievement in and attitudes toward reading. High teacher achievement and positive teacher attitudes were reflected in the students.

High anxiety also interferes with learning and task performance and is related to teacher feedback. Cooper (1977) showed that when teachers stop criticizing students, those students begin to interact with teachers more positively. Wigfield (cited in Wigfield & Asher, 1984) showed that instructions emphasizing task concentration improved achievement when compared to instructions that described the task as a measure of ability.

Children's school performance is also influenced by peers (Ruble, Boggianao, Feldman, & Loebl, 1980). As students progress through the elementary school years they increasingly conform to peer group standards (Berends and others cited in Wigfield & Asher, 1984). Evidence indicates that low SES children value academic activities less and

conform more so they may do poorly in school to gain acceptance by peers (Wigfield & Asher, 1984).

Kibby (1977) found that student status as a reader in a classroom determines attitude more than reading performance. Students with relatively poor reading achievement who were relatively good readers in their class had significantly more positive attitudes toward reading than students with significantly higher reading achievement who were not relatively good readers in their class.

Although Swanson (1985) reported no significant correlation between first graders attitudes toward reading and reading achievement, a correlation was reported between student reading achievement and teacher judgement of student reading enthusiasm. Walberg and Tsai (1985), on the other hand, reported a relationship between attitude toward reading and reading achievement for nine-year-c d students.

United States studies have found sex differences in reading attitude and achievement motivation. Murray and Mednick (1975) found that black males were more likely to make external attributions for success than black females. Parker and Paradis (1986) found elementary girls have more positive attitudes toward reading than elementary boys. The greatest differences in attitude between the sexes occurred in grades two, four, and five. Dwyer and Reed (1989) also

found that upper elementary boys have substantially poorer attitudes toward reading than girls.

Developmental differences in achievement motivation have also been assessed. Younger children maintain higher expectancies for future success after experiencing failure than older children (Parsons & Ruble, cited in Wigfield & Asher, 1984). Further, young children do not perceive school success as related to ability (Nicholls, cited in Wigfield & Asher, 1984). Until the age of twelve or thirteen, being able means trying harder if success and failure feedback is unclear (Blumenfeld, Pintrich, Meece, & Wessels, cited in Wigfield & Asher, 1984).

Overall, the affective domain interacts with reading achievement and performance. Variables impacting on the affective domain related to attitude and achievement motivation are SES, sex, peer influence, age, home environment, and classroom environment.

## Problem Statement

Although we know that attitudes are generally related to motivation, achievement, and performance--the research literatures are relatively fragmented. Current researchers have generally been more interested in the development of achievement motivation toward learning rather than reading (Wigfield & Asher, 1984). Numerous studies assessed the relationship between reading achievement and children's

attitudes toward reading in the fifties, sixties, and seventies (Alexander & Filler, 1976). A review of literature from the last decade, however, reveals a lack of research dealing with the relationship of attitudes toward reading with reading achievement and performance. This lack of research is particularly true for primary grade students.

Although the literature generally supports poor readers having less positive attitudes toward reading than good readers, the studies showing these results have mainly assessed upper grade level students. The few studies attempted at the early primary level have not been able to describe a relationship. There is also little evidence to indicate at what age a child's attitudes toward reading become related to reading achievement.

Another problem with the literature is that the correlations for attitude toward reading with reading achievement and performance have been modest. The literature has addressed attitudes toward reading in a global rather than a specific sense. The modest correlational results therefore may be due in part to the lack of specificity when investigating reading attitudes.

The literature currently lacks a distinction between reading achievement and reading performance related to attitude. The most common scores used to measure reading

achievement focus on assessing an answer to a multiple choice question. This type of assessment is an indirect measure of the cognitive process of comprehension. The modest correlational results therefore may be due to focusing on a measure of performance that is less understood by young children. Overall, the relation of attitude, achievement, and performance to reading is more complicated than current research addresses.

Focus of the Study

This study focuses on describing second grade urban students' attitudes toward reading and investigating the relationships of those attitudes with reading achievement and with reading performance. First, the study describes six aspects of attitudes toward reading (Heathington, 1976):

1. Free classroom reading
2. Organized classroom reading
3. Reading at library
4. Reading at home
5. Other recreational reading
6. Total reading.

Second, the study investigates whether reading achievement, as measured by a standardized reading achievement test, is related to second grade urban students' total attitude toward reading or any particular aspect of attitude toward

reading. Finally, the study explores whether reading performance, as measured by a miscue analysis, is related to second grade urban students' total reading attitude or a particular aspect of attitude toward reading.

Research Questions

1. What are second grade urban students' attitudes toward reading?
2. What are the relationships between second grade urban students' attitudes toward reading and their reading achievement?
3. What are the relationships between second grade urban students' attitudes toward reading and their reading performance?

Rationale

Robeck and Wilson (cited in Alexander & Filler, 1976, p.1) define reading as a "process of translating signs and symbols into meanings and incorporating new meanings into existing cognitive and affective systems." An updated definition by Vacca, Vacca, and Gove (1987) adds looking at reading from three perspectives: cognitive, linguistic, and social. From a cognitive perspective, reading is defined as a thinking process; from a linguistic perspective, reading is defined as a language process; and from a social perspective, reading is defined as using written language in

a social situation for purposeful communication.

Reading, in this study, is approached using a combination of both definitions. Silent reading is seen as the thinking process that translates signs and symbols into meaningful thought that can be measured through written responses to questions about what is read. Oral reading is seen as the thinking process that translates signs and symbols into oral language in a social context.

Attitude, as defined by Quandt (cited in Vacca & Vacca, 1989), is the internal position a person takes for or against someone or something. Attitude toward reading, as described by Alexander and Filler (1976):

> Consist...[s] of a system of feelings related to reading which causes the learner to approach or avoid a reading situation. A learner's attitudes may vary with his personal predispositions and may be affected in unique ways by variables within the learner and his environment....Variables thought to be associated with attitudes ...[are]... achievement, self-concept, parents and the home environment, the teacher and classroom environment, instructional practices and special programs, sex, test intelligence, socioeconomic status, and student interests." (pp. 1-3)

In addition to the above definitions, this study's theoretical orientation toward attitude includes an

assumption concerning the general acceptance of Piagetian cognitive development (Ormond, 1990). It is assumed that a second grade student is less able to compare his silent reading performance to that of his peers whereas he is more able to compare his oral reading performance to that of his peers. Support for this assumption comes from Brown (cited in Calfee & Drum, 1986) who confirmed "that children cannot assess missing links in their own knowledge structures; they do not know what they don't know" (p. 839). It would follow then that a second grade child is less able to make abstract comparative inferences about silent reading achievement than he is to make comparisons about oral reading performance.

More specifically, children can hear oral differences and sense pragmatic differences such as gestures and facial expressions during oral reading in a group. They can also hear and observe teacher reaction to student oral reading. This assumption is supported by Bruckerhoff (1977) who reported that students felt oral reading had been unpleasant and impacted on them negatively.

Silent reading, however, is more subtle, less known, and significantly more abstract particularly if the child's perception of reading is getting the words right. Cognitively speaking, a lower level of cognitive development is required for a child to make comparisons of oral reading performance than silent reading achievement.

The assumption that achievement motivation is environmentally related is derived from Weiner's hypothesis (cited in Wigfield & Asher, 1984) that race and socioeconomic status (SES) differences in achievement are due to attributional processes. Murray and Mednick (1975) support this hypothesis in a study which determined that black males were more likely to make external attributions for success than black females. Further support for this assumption also originates in personal observation and experience. Children model adult and peer behavior. When important people in a child's life model attributional patterns or comparative ways of looking at the world, these behaviors are imitated and internalized by the child. Continuing attributions and comparisons made by oneself and others then become a factor in achievement motivation which in turn relates to attitude formation.

Reading attitude, therefore, is more complicated than just knowing how a student feels about reading (Vacca & Vacca, 1989). Attitude, as used in this study, refers to a complex variable for which interrelationships have not yet been definitively established.

Purpose of the Study

The purpose of this study is threefold. First, it seeks to describe attitudes toward reading of second grade urban students. Second, it seeks to determine whether

relationships exist for those attitudes and reading achievement. Third, it seeks to determine whether relationships exist for those attitudes and reading performance.

Variables Defined

Attitudes toward reading are operationally defined as scores on the Heathington Primary Reading Attitude Scale (Alexander & Filler, 1976). A total score (range 20-100) is further broken down into five aspects of attitude toward reading. The five aspects are:

1. Free classroom reading (range 2-10)
2. Organized classroom reading (range 4-20)
3. Reading at library (range 2-10)
4. Reading at home (range 4-20)
5. Other recreational reading (range 4-20).

The average rating for the total and each aspect will be used for reporting purposes.

Reading achievement is operationally defined as extended scale scores students receive on Level 2 of the reading comprehension portion of the Gates MacGinitie Reading Test (3rd ed.).

Reading performance is operationally defined three ways:

1. The total oral reading miscues per a one hundred word passage at the primary level (if the student is

unable to complete a passage at the primary level, a passage at the preprimer level will be used).

2. The meaning changing oral reading miscues per a one hundred word passage at the primary level (if the student is unable to complete a passage at the primary level, a passage at the preprimer level will be used).

3. Oral reading rate on a one hundred word passage at the primary level (if the student is unable to complete a passage at the primary level, a passage at the preprimer level will be used) measured in words per minute.

Significance

This study seeks to provide the basis for further work that will determine whether attitudes toward reading are related with reading achievement and performance of young urban students. Once these relations are clear, researchers can determine if any of these variables predict the others or if they are interrelated. Educators would then be better able to develop strategies and design classroom environments that enable students to form attitudes that facilitate reading.

Contribution of the Study

There is a relationship between attitude toward reading and reading achievement in nine-year-old students (Walberg & Tsai, 1985) but Swanson (1985) reported no significant

correlation between first graders' attitudes toward reading and reading achievement. Since "attitude is a primary determination of whether students will approach or avoid textbooks" (Vacca & Vacca, 1989, p. 38), the onset of this relationship must be more specifically described so contributing variables at various stages of cognitive developmental can be identified for experimental research.

Source of Data

Primary students were chosen for this study because few reading studies correlating attitude, achievement, and performance have been undertaken at the primary level. Second grade was selected for study so that all students had received at least one year of reading instruction resulting in quantifiable determinations of performance.

Five second grade teachers from two urban public elementary schools volunteered to participate in this project. The students in these buildings are ethnically and racially diverse. Parental and student permission for eighty four students (42 males and 42 females) was received for participation in the study.

Students were individually assessed on primer or preprimer passages using miscue analysis and forms from the Basic Reading Inventory (Johns, 1988). Assessments were completed by four certified reading specialists in October 1989. All assessments were completed in the morning. The

Gates MacGinitie standardized reading test and the Heathington Primary Reading Attitude Scale were administered approximately one week after the informal reading inventories were completed.

Analysis Procedures

To answer research question one, the mean and standard deviation for each of the six aspects of reading attitude are reported for boys, girls, and all subjects.

To answer research question two, the mean and standard deviation for reading achievement are reported for boys, girls, and all subjects. The mean achievement scores are then correlated with each measure of attitude using the Pearson product-moment correlation coefficient (r) and values of r are assessed for significance.

To answer research question three, the mean and standard deviation for each of the three measures of reading performance are reported for boys, girls, and all subjects using pre-primer and primer scores, then primer scores only. The mean performance scores are then correlated with each measure of attitude using r and values of r are assessed for significance.

Limitations

This study is limited by the lack of validity and reliability of individual aspects of reading attitude as measured by the Heathington Primary Reading Attitude Scale.

The scale was originally constructed and validated for use as a total scale. The researcher, however, saw a need for a starting point to determine if a breakdown occurs before constructing a totally new instrument.

## Results

Question 1 (see Table 1)

Classroom reading. All subjects on the average scored slightly above the happy rating of 4.00. Girls' scores were more variable than boys' scores.

Organized classroom reading. All subjects on the average scored between the neutral rating of 3.00 and the happy rating of 4.00. Boys' scores were higher than girls' scores and girls' scores were more variable than boys' scores.

Reading at library. All subjects on the average scored between the happy rating of 4.00 and the very happy rating of 5.00. Overall, this was the highest score for all subjects. Boys' scores were higher and more variable than girls' scores.

Reading at home. All subjects on the average scored slightly above the happy rating of 4.00. Boys' scores were slightly below 4.00 while girls' scores were above 4.00. Boys' scores were more variable than girls' scores.

Other recreational reading. All subjects on the average scored between the neutral rating of 3.00 and the

happy rating of 4.00. Overall, this was the lowest score for all subjects. Boys' scores were lower than girls' scores, but girls' scores were more variable than boys' scores.

Total reading. All subjects on the average scored slightly below the happy rating of 4.00. Boys' scores were lower than girls' scores, but girls' scores were more variable than boys' scores.

Question 2

The mean extended scale score for comprehension (see Table 2) was 381.3214 for all subjects which is equal to a grade equivalent of 1.7. For boys, the mean was 374.9048 which is equal to a grade equivalent of 1.6. For girls, the mean was 387.7318 which is equal to a grade a equivalent of 1.7. On the average, boys were one month behind the girls in reading comprehension and all subjects were four months behind national averages as measured by the Gates MacGinitie Reading Test.

Correlations of reading achievement with attitude are shown in Table 3. All correlations were in the low range, some positive and some negative. Reading at library was negatively correlated with achievement for boys and all subjects at significance $p < .05$. The remainder of the correlations were not significant at $p < .05$.

Question 3

The mean performance scores (see Table 4) show that boys and girls who were able to read at the primer level made fewer total miscues, fewer meaning changing miscues, and read faster than children who could not read at the primer level. Although there was less variability in the miscues at the primer only level, the variability was similar for oral reading rate in both groups.

Correlations of reading performance with attitude at the primer and pre-primer level are shown in Table 5. Most correlations were in the low range, some positive and some negative. However, there was a moderate negative correlation for Reading at library with Oral reading rate for boys at significance $p < .01$. This correlation was strong enough to suggest a low negative correlation for Reading at library with Oral reading rate for all subjects at significance $p < .05$ even though the correlation for girls was extremely low and insignificant.

Correlations of reading performance with attitude at the primer only level are shown in Table 6. Most correlations were in the low range, some positive and some negative. However, there was a moderate negative correlation for Reading at library with Oral reading rate for boys at significance $p < .05$.

## Discussion

This study supports the fact that our urban youth are struggling. At the beginning of second grade these student are already an average of four months behind national norms according to standardized testing and the boys are one month further behind than the girls. On the average, however, their attitudes toward reading are still on the positive side, but we see slippage particularly in relation to recreational reading where the average is quickly approaching a neutral attitude.

The correlation of total reading attitude with achievement replicates previous findings of nonsignificant low correlations. This indicates that looking at total attitude is not a fruitful line of investigation. However one aspect of attitude, Reading at library, significantly correlated with reading achievement and oral reading rate particularly for boys. This doesn't tell us that fast readers don't like reading at the library because a check of the mean score for boys shows the most positive attitude of all.

Further, a comparison of the correlations for Reading Performance that included the primer and pre-primer level with the correlations that included only the primer level indicates that the poorest readers who could not even get through a primer level passage had more positive attitudes

toward reading at the library than those who were able to complete the primer passage and beyond. Therefore, reading at the library appears to be a truly positive experience especially for boys who are the slowest readers. The absence of pressure to perform at a particular level as well as the choice that abounds in the library appear to be consistent with the individualized literature based reading model. Student empowerment without competition is also supported by this finding.

Although there were few significant correlations between reading performance and attitude toward reading, the subjects' comments during testing and interviewing support a relationship. Further investigation is warranted into the nature of the variables that are related to attitude toward reading. More specifically, many of the good readers viewed themselves as poor readers. Future research could focus on what it is about their performance or perception of the reading process that they are using to make this judgement or who they are comparing themselves to.

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Table 1

Mean Heathington Primary Attitude Scale Scores

| Attitude | Cases | Mean | Std.Dev. |
|---|---|---|---|
| Free classroom reading | | | |
| Boys | 34 | 4.0294 | .8252 |
| Girls | 34 | 4.0294 | .9609 |
| All Subjects | 68 | 4.0294 | .8889 |
| Organized classroom reading | | | |
| Boys | 33 | 3.8030 | .7875 |
| Girls | 34 | 3.7132 | .9616 |
| All Subjects | 67 | 3.7575 | .8747 |
| Reading at library | | | |
| Boys | 34 | 4.5147 | .7016 |
| Girls | 34 | 4.4265 | .6171 |
| All Subjects | 68 | 4.4706 | .6572 |
| Reading at home | | | |
| Boys | 35 | 3.9429 | .8469 |
| Girls | 34 | 4.2647 | .5434 |
| All Subjects | 69 | 4.1014 | .7267 |
| Other recreational reading | | | |
| Boys | 35 | 3.3786 | .8774 |
| Girls | 33 | 3.5379 | .9209 |
| All Subjects | 68 | 3.4559 | .8956 |
| Total reading | | | |
| Boys | 35 | 3.8544 | .5459 |
| Girls | 34 | 3.9422 | .6304 |
| All Subjects | 69 | 3.8977 | .5864 |

Table 2

Mean Gate MacGinitie Extended Scale Score for Reading Comprehension Achievement

| Achievement | Cases | Mean | Std.Dev. |
|---|---|---|---|
| Reading achievement | | | |
| Boys | 42 | 374.9048 | 49.7549 |
| Girls | 42 | 387.7381 | 58.3518 |
| All Subjects | 84 | 381.3214 | 54.2815 |

Table 3

Correlations of Reading Achievement with Attitudes Toward Reading

| Attitudes | Boys | Girls | All Subjects |
|---|---|---|---|
| Free classroom reading | -.0037 | -.2127 | -.1193 |
| Organized classroom reading | .0749 | .0666 | .0628 |
| Reading at library | -.3428* | -.1199 | -.2431* |
| Reading at home | .1638 | -.2125 | .0504 |
| Other recreational reading | .0744 | .0000 | .0501 |
| Total reading | .0598 | -.1390 | -.0345 |

*$p<.05$, two-tailed.

Table 4

Mean Reading Performance Scores

| Performance | Cases | Mean | Std.Dev. |
|---|---|---|---|
| Primer and Pre-primer | | | |
| Total miscues | | | |
| Boys | 39 | 14.6410 | 15.0674 |
| Girls | 40 | 15.9750 | 15.8608 |
| All Subjects | 79 | 15.3165 | 15.3894 |
| Meaning changing miscues | | | |
| Boys | 39 | 10.1795 | 13.6341 |
| Girls | 40 | 9.7000 | 13.5650 |
| All Subjects | 79 | 9.9367 | 13.5139 |
| Oral reading rate | | | |
| Boys | 39 | 50.6410 | 33.0848 |
| Girls | 40 | 56.1250 | 39.4118 |
| All Subjects | 79 | 53.4177 | 36.2978 |
| Primer Only | | | |
| Total miscues | | | |
| Boys | 33 | 11.1212 | 11.9602 |
| Girls | 35 | 13.2857 | 11.3100 |
| All Subjects | 68 | 12.2353 | 11.5940 |
| Meaning changing miscues | | | |
| Boys | 33 | 6.0909 | 8.6327 |
| Girls | 35 | 7.0857 | 8.7157 |
| All Subjects | 68 | 6.6029 | 8.6251 |
| Oral reading rate | | | |
| Boys | 33 | 57.0000 | 32.0088 |
| Girls | 35 | 61.2286 | 39.4082 |
| All Subjects | 68 | 59.1765 | 35.8046 |

Table 5

Correlations of Reading Performance with Attitudes Toward Reading (primer and pre-primer)

| Attitudes | Boys | Girls | All Subjects |
|---|---|---|---|
| Free classroom reading | | | |
| Total miscues | .0589 | .2094 | .1499 |
| Meaning changing miscues | .0275 | .0583 | .0449 |
| Oral reading rate | -.1589 | -.1292 | -.1410 |
| Organized classroom reading | | | |
| Total miscues | .1595 | -.1555 | -.0491 |
| Meaning changing miscues | .1384 | -.2401 | -.0969 |
| Oral reading rate | -.1654 | .1696 | .0260 |
| Reading at library | | | |
| Total miscues | .3458 | -.0616 | .1432 |
| Meaning changing miscues | .3474 | -.1037 | .1528 |
| Oral reading rate | -.5014** | -.0541 | -.2907* |
| Reading at home | | | |
| Total miscues | .0788 | .0979 | .0912 |
| Meaning changing miscues | .0595 | -.0630 | .0033 |
| Oral reading rate | -.0928 | -.2515 | -.1209 |
| Other recreational reading | | | |
| Total miscues | -.0227 | -.1662 | -.0899 |
| Meaning changing miscues | .0128 | -.2857 | -.1331 |
| Oral reading rate | -.1562 | .1294 | .0034 |
| Total reading | | | |
| Total miscues | .1023 | -.0182 | .0409 |
| Meaning changing miscues | .0963 | -.1651 | -.0404 |
| Oral reading rate | -.2405 | -.0322 | -.1152 |

*$p<.05$, two-tailed.

**$p<.01$, two-tailed.

Table 6

Correlations of Reading Performance with Attitudes Toward Reading (primer only)

| Attitudes | Boys | Girls | All Subjects |
|---|---|---|---|
| Free classroom reading | | | |
| Total miscues | .0618 | .3075 | .2142 |
| Meaning changing miscues | .0119 | .0880 | .0598 |
| Oral reading rate | -.1686 | -.1097 | -.1330 |
| Organized classroom reading | | | |
| Total miscues | .1354 | -.0278 | .0345 |
| Meaning changing miscues | .0899 | -.1533 | -.0598 |
| Oral reading rate | -.1043 | .1527 | .0480 |
| Reading at library | | | |
| Total miscues | .2507 | .0439 | .1268 |
| Meaning changing miscues | .2385 | -.0239 | .0887 |
| Oral reading rate | -.4246* | -.0652 | -.2363 |
| Reading at home | | | |
| Total miscues | .1045 | .2189 | .1932 |
| Meaning changing miscues | .1367 | .0099 | .0998 |
| Oral reading rate | -.1560 | -.2925 | -.2025 |
| Other recreational reading | | | |
| Total miscues | -.0326 | -.0327 | .0029 |
| Meaning changing miscues | -.0228 | -.2029 | -.1033 |
| Oral reading rate | -.0998 | .0971 | .0121 |
| Total reading | | | |
| Total miscues | .1165 | .1630 | .1651 |
| Meaning changing miscues | .1126 | -.0450 | .0324 |
| Oral reading rate | -.2328 | -.0628 | -.1321 |

*$p<.05$, two-tailed.